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(54) Title: DATA-READING COMPUTER TRACKING DEVICE, SYSTEM AND METHOD UTILIZING SAME
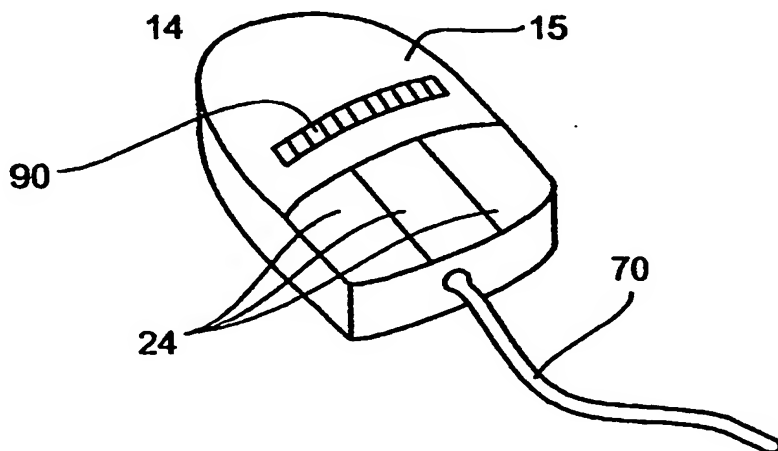
(57) Abstract: A system for automatically entering an electronic address. The system includes a user-client (12) and a data-reading computer tracking device (14) including a computer tracking device (15) and a data-reader (18) being integrated therein, the data-reading computer tracking device (14) effectively communicating with the user-client (12) for entering the electronic address thereto by reading and interpreting a printed form of the electronic address.

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DATA-READING COMPUTER TRACKING DEVICE, SYSTEM AND METHOD UTILIZING SAME

FIELD AND BACKGROUND OF THE INVENTION

The present invention relates to a data-reading computer tracking device, and to a system and method utilizing same or a computer integrated, add-on or connectable data-reader. More particularly, the present invention related to a code-reading computer tracking device, such as a mouse or a pointer, or to a computer integrated, add-on or connectable data-reader and the use thereof for automatically entering an electronic address, such as a web page address or an electronic mail address into a user client and optionally and preferably automatically accessing a web page.

A barcode is a code which is presently used for providing efficient identification of products and/or additional information pertaining to the product. A barcode typically includes a plurality of bars, or concentric circles, the thickness thereof and the spaces therebetween are used to code information pertaining to the product. Two dimensional barcodes which are used to encode a larger amount of information are also known. Magnetic barcodes are also known. A barcode is identified and interpreted by a barcode reader. Such a reader typically includes an optical system capable of differentiating between different barcodes on the basis of the thickness of, and/or the spaces between, the bars thereof. Magnetic barcode readers are also known.

A computer tracking device is an accessory which is used to operate a computer. Several such devices are known, including, but not limited to a mouse, a pointer, a track ball, a track stick, a track pad, Internet-TV remote control, etc. In all cases, however, the tracking device assists a user of pointing to a desired location of the computer's screen and to thereby either automatically or by further manual operation to activate a function of the computer or of a software operated thereby.

The use of the Internet in increasing daily. Nowadays the internet serves a plurality of functions, amongst which is the quick access to information, including, but not limited to, promotional and advertising information. In order to access such information, pertaining, for example, to a specific product or service, a user is required to enter an alphanumeric address of a certain web page on the net or an alphanumeric electronic mail address. To do so, the user typically uses a computer's keyboard which is

both cumbersome and inherently calls for mistakes in entering the correct address.

There is thus a widely recognized need for, and it would be highly advantageous to have, a data-reading computer tracking device or a computer integrated, add-on or connectable data-reader and a system and method utilizing same for automatically entering an electronic address, such as a web page address or an electronic mail address, to a user client and optionally and preferably automatically accessing a web page.

SUMMARY OF THE INVENTION

According to one aspect of the present invention there is provided a data-reading computer tracking device comprising a computer tracking device and a data-reader being integrated therein, the data-reader being for reading a printed form of an electronic address.

According to another aspect of the present invention there is provided a system for automatically entering an electronic address, the system comprising (a) a user-client; and (b) a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein, the data-reading computer tracking device effectively communicating with the user-client for entering the electronic address thereto by reading and interpreting a printed form of the electronic address.

According to yet another aspect of the present invention there is provided a method of automatically entering an electronic address into a user-client, the method comprising the step of using a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein for reading and interpreting a printed form of the electronic address and for automatically entering the electronic address into a user-client with which the data-reading computer tracking device communicates.

According to still another aspect of the present invention there is provided a system for automatically entering an electronic address, the system comprising (a) a user-client; and (b) a data-reader effectively communicating with the user-client for entering the electronic address thereto by reading and interpreting a printed form of the electronic address.

According to a further aspect of the present invention there is provided a method of automatically entering an electronic address into a user-client, the method comprising the step of using a data-reader for

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reading and interpreting a printed form of the electronic address and for automatically entering the electronic address into a user-client with which the data-reading computer tracking device communicates.

According to further features in preferred embodiments of the invention described below, the electronic address is selected from the group consisting of an electronic mail address and a web page address.

According to still further features in the described preferred embodiments the printed form of the electronic address is selected from the group consisting of a print of the electronic address and a print of a code of the electronic address.

According to still further features in the described preferred embodiments the user client stores and operates a software designed to automatically communicate the electronic address to a second software selected from the group consisting of an electronic mail software or to a web page browser software, stored and operated by the user client.

According to still a further aspect of the present invention there is provided a system for automatically accessing a web page, the system comprising (a) a user-client; and (b) a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein, the data-reading computer tracking device effectively communicating with the user-client for entering a web page address thereto by reading and interpreting a printed form of the web page address or a printed code thereof and further for actuating access to the web page.

According to an additional aspect of the present invention there is provided a method of automatically accessing a web page, the method comprising the step of using a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein for reading and interpreting a printed form of the web page address and for automatically entering the web page address into a user-client with which the data-reading computer tracking device communicates and further for actuating access to the web page.

According to still an additional aspect of the present invention there is provided a system for automatically accessing a web page, the system comprising (a) a user-client; and (b) a data-reader effectively communicating with the user-client for entering a web page address thereto by reading and interpreting a printed form of the web page address or a printed code thereof and further for actuating access to the web page.

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According to yet an additional aspect of the present invention there is provided a method of automatically accessing a web page, the method comprising the step of using a data-reader for reading and interpreting a printed form of the web page address and for automatically entering the web page address into a user-client with which the data-reader communicates and further for actuating access to the web page.

According to further features in preferred embodiments of the invention described below, the computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick and a track pad.

According to still further features in the described preferred embodiments the data-reader includes a barcode reader.

According to still further features in the described preferred embodiments the data-reader includes an optical scanner.

According to still further features in the described preferred embodiments the printed form of the web page address is selected from the group consisting of a print of the web page address and a print of a code of the web page address.

According to still further features in the described preferred embodiments the code is a barcode.

According to still further features in the described preferred embodiments the user client stores and operates a software designed to automatically communicate the web page address to a web page browser software, stored and operated by the user client.

According to still further features in the described preferred embodiments the user client stores and operates a software designed to automatically render operative, and communicate the web page address to, a web page browser software, stored and operated by the user client.

According to still further features in the described preferred embodiments the user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

According to yet an additional aspect of the present invention there is provided a mouse pad comprising a pad being adapter for dragging a computer mouse thereon having at least one barcode encoding an electronic address being printed thereon.

The present invention successfully addresses the shortcomings of the presently known configurations by providing a data-reading computer

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tracking device or a user client integrated, add-on or connectable data-reader, a system including same and a method using same for automatically entering an electronic address, such as a web page address or an electronic mail address into a user client and optionally and preferably automatically accessing a web page.

Implementation of the device, system and method of the present invention involves performing or completing selected tasks or steps manually, automatically, or a combination thereof. Moreover, according to actual instrumentation and equipment of preferred embodiments of the method and system of the present invention, several selected steps could be implemented by hardware or by software on any operating system of any firmware or a combination thereof. For example, as hardware, selected steps of the invention could be implemented as a chip or a circuit. As software, selected steps of the invention could be implemented as a plurality of software instructions being executed by a computer using any suitable operating system. In any case, selected steps of the method and system of the invention could be described as being performed by a data processor, such as a computing platform for executing a plurality of instructions.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is herein described, by way of example only, with reference to the accompanying drawings. With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles and conceptual aspects of the invention. In this regard, no attempt is made to show structural details of the invention in more detail than is necessary for a fundamental understanding of the invention, the description taken with the drawings making apparent to those skilled in the art how the several forms of the invention may be embodied in practice.

In the drawings:

FIGs. 1a-b are perspective top and bottom views of a mouse including a data-reader according to the present invention;

FIG. 2 is a perspective view of a pointer for use with touch screen, e.g., in personal assist devices such as palmtop computers and computers

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installed in cellular telephones, including a data-reader according to the present invention;

FIG. 3 is a perspective view of track-ball including a data-reader according to the present invention;

FIG. 4 is a perspective view of a track-stick including a data-reader according to the present invention;

FIG. 5 is a perspective view of a track-pad including a data-reader according to the present invention;

FIG. 6 is a top view of an Internet-TV remote control including a data-reader according to the present invention;

FIG. 7 is a schematic depiction of a system according to the present invention; and

FIG. 8 is a perspective view of a mouse pad according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention is of a data-reading computer tracking device or computer integrated, add-on or connectable data-reader and a system and method utilizing same which can be used for automatically entering an electronic address, such as a web page address or an electronic mail address into an desired software stored in, and executed by, a user client. Specifically, the present invention can be used to enable automatic access to a web page.

The principles and operation of the present invention may be better understood with reference to the drawings and accompanying descriptions.

Before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments or of being practiced or carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein is for the purpose of description and should not be regarded as limiting.

Referring now to the drawings, Figure 7 illustrates a system according to the present invention which is designed for automatically entering an electronic address in a computer readable form into a computer device, which is referred to hereinbelow as system 10.

System **10** according to the present invention includes a user-client **12**.

As used herein in the specification and in the claims section that follows the phrase "user client" includes, but is not limited to, personal computers (PC) having an operating system such as DOS, Windows™, OS/2™ or Linux; Macintosh™ computers; computers having JAVA™-OS as the operating system; and graphical workstations such as the computers of Sun Microsystems™ and Silicon Graphics™, and other computers having some version of the UNIX operating system such as AIX™ or SOLARIS™ of Sun Microsystems™; a PalmPilot™, a PilotPC™, Nokia Communicator™ or any other handheld device; or any other known and available operating system. The term further includes mobile cellular telephone devices and mobile cellular communicator devices having, in addition to telephone properties, capabilities similar to those of a personal computer (PC) or a personal digital assistant (PDA). In addition the term also includes television devices, such as Internet-TV devices, having, in addition to broadcasting reception properties, capabilities similar to those of a personal computer (PC) or a personal digital assistant (PDA). In particular, and in a minimal configuration such capabilities enable connecting to the Internet and/or mailing/receiving electronic mail messages and/or attachments.

Hereinafter, the term "Windows™" includes but is not limited to Windows95™, Windows 3.x™ in which "x" is an integer such as "1", Windows NT™, Windows98™, Windows CE™ and any upgraded versions of these operating systems by Microsoft Inc. (Seattle, Washington, USA).

According to one embodiment of the present invention system **10** according to the present invention further includes a data-reading computer tracking device **14**.

Several configurations for data-reading computer tracking devices according to the present invention as shown in Figures 1a-6, each of which is described in greater detail hereinbelow.

In all cases, however, device **14** includes a computer tracking device **16** and a data-reader **18** which is integrated therein. According to the gist of the present invention data-reading computer tracking device **14** effectively communicates with user-client **12** for entering the electronic address thereto in a computer readable form by reading and interpreting a printed form, either coded or non-coded, of the electronic address. Such an electronic address can be of, for example, a web page, such as, but not limited to, fttp or ftp web page address, or of an electronic mail address.

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Thus, as shown in Figures 1a-b, device 14 can, for example, be realized as a computer mouse 15. Such a mouse includes a minimally protruding track ball 20 capable of freely rolling in a socket 22. Such rolling occurs, for example, when the mouse is moved or dragged over a surface of sufficient friction. Internal detectors are used to monitor the movement of the ball and to accordingly move a courser, such as an arrow, a bar or sand-watch, on the computer screen. Mouse 15 further includes operation buttons 24 for actuating software functions. Integrated in computer mouse 15 is data-reader 18, which is described in more detail hereinunder. To operate, such a mouse requires communication with user client 12 and a dedicated software installed on user client 12 and operated thereby. The actuation of such mouse software is preferably entered into the initiation protocol of user client 12, such that it is rendered operative upon starting user client 12.

As shown in Figure 2, device 14 can, for example, be realized as a pointer 26 for use with touch screen, e.g., in personal assist devices such as palmtop computers and computers installed in cellular telephones. Such a pointer includes a pointed tip designed for permitting the required pointing resolution. Integrated in pointer 26 is data-reader 18, which is described in more detail hereinunder. Pointer 15 preferably further includes operation buttons 24 for actuating software functions. To operate, such a pointer requires communication with user client 12 and a dedicated software installed on user client 12 and operated thereby. The actuation of such software is preferably entered into the initiation protocol of user client 12, such that it is rendered operative upon starting user client 12.

As shown in Figure 3, device 14 can, for example, be realized as a track ball device 30. Such a track ball device includes a substantially protruding track ball 32 capable of freely rolling in a socket 34. Such rolling occurs, for example, when the ball is rolled by the hand of a user. Internal detectors are used to monitor the movement of the ball and to accordingly move a courser, such as an arrow, a bar or sand-watch, on the computer screen. Device 30 further includes operation buttons 24 for actuating software functions. Integrated in device 30 is data-reader 18, which is described in more detail hereinunder. To operate, such a track ball device requires communication with user client 12 and a dedicated software installed on user client 12 and operated thereby. The actuation of such a software is preferably entered into the initiation protocol of user client 12, such that it is rendered operative upon starting user client 12.

As shown in Figure 4, device **14** can, for example, be realized as a track stick device **40**. Such a track stick device includes a track stick **42** capable of freely rotating in a socket **44**. Such rotation occurs, for example, when the stick is rotated by the hand of a user. Internal detectors are used to monitor the movement of the stick and to accordingly move a courser, such as an arrow, a bar or sand-watch, on the computer screen. Device **40** further includes operation buttons **24** for actuating software functions. Integrated in device **40** is data-reader **18**, which is described in more detail hereinunder. To operate, such a track stick device requires communication with user client **12** and a dedicated software installed on user client **12** and operated thereby. The actuation of such a software is preferably entered into the initiation protocol of user client **12**, such that it is rendered operative upon starting user client **12**.

As shown in Figure 5, device **14** can, for example, be realized as a track pad device **50**. Such a track pad device includes a track pad **52** which includes sensors for sensing an object, such as a finger dragged thereon and accordingly move a courser, such as an arrow, a bar or sand-watch, on the computer screen. Device **50** further includes operation buttons **24** for actuating software functions. Integrated in device **40** is data-reader **18**, which is described in more detail hereinunder. To operate, such a track pad device requires communication with user client **12** and a dedicated software installed on user client **12** and operated thereby. The actuation of such a software is preferably entered into the initiation protocol of user client **12**, such that it is rendered operative upon starting user client **12**.

As shown in Figure 6, device **14** can, for example, be realized as an Internet-TV remote control **60**. Such a remote control includes a tracking mechanism, which can be realized as any of the above mechanisms, or as, say, four finger operated direction indicators **62** used to move a courser, such as an arrow, a bar or sand-watch, on the TV screen. Control **60** further includes operation buttons **24** for actuating software functions. Integrated in device **40** is data-reader **18**, which is described in more detail hereinunder. To operate, such a remote control requires communication with user client **12** and a dedicated software installed on user client **12** and operated thereby. The actuation of such a software is preferably entered into the initiation protocol of user client **12**, such that it is rendered operative upon starting user client **12**.

As stated hereinabove, a device **14** according to any of its presently preferred embodiments includes a data-reader **18**.

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According to a preferred embodiment of the present invention data-reader **18** is an optical scanner. The optical scanner can be selected from any class of optical scanners, such as, but not limited to, laser optical scanners, LED optical scanners and CCD optical scanners. Further details relating to types of optical scanners are found in, for example, U.S. Pat. No. 5,640,002, which is incorporated by reference as if fully set forth herein. An optical scanner is used to scan a print of an electronic address, such as a web page address (or its domain name server (DNS)), an electronic mail address or a code thereof. In any case, optical character recognition (OCR) software can be used to translate the printed address or the code into a computer readable form.

Miniaturized optical scanners and OCR software are well known in the art. For example, an optical scanner, OCR software and a dictionary software were successfully integrated in a pen-like device, for assisting a reader in understanding foreign language text while reading.

Such a miniaturized optical scanner can be readily integrated into any conventional computer tracking device to form device **14** in accordance with the teachings of the present invention. Technically, such an integration can be readily achieved by one of ordinary skills in the art.

According to a preferred embodiment of the present invention data-reader **18** is a barcode reader, such as an optical barcode reader or a magnetic barcode reader, whereas the electronic address is encoded by a printed, optionally magnetic, barcode. The barcode can be, for example, a linear barcode, a circular barcode, or a two dimensional barcode, as for example described in the home page of Intelligent Barcode Systems, Inc./Sunmax Corp. (see, http//www. barcodesystems.com).

Miniaturized barcode readers and software for their operation are well known in the art. Such a miniaturized barcode reader can be readily integrated into any conventional computer tracking device to form device **14** in accordance with the teachings of the present invention. Technically, such an integration can be readily achieved by one of ordinary skills in the art.

Thus, according to the present invention, an electronic address or a code thereof can be printed on, adhered to, and/or detachable from, a product and/or its container. Such an address can alternatively or additionally be printed on, adhered to, and/or detachable from a printed advertisement of the product. In the latter case, the product can also be a service.

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Further detail relating to a miniaturized scanners and barcode readers is available at www.sumbol.com.

As stated hereinabove, a device 14 according to any of its presently preferred embodiments requires communication with user client 12. Such communication can be realized by, for example, cord communication, as indicated in Figures 1a-5 and 7 at 70, or by cordless communication. Cordless communication can be effected by any remote communication mode, such as, but not limited to, electromagnetic communication, e.g., radio communication, infrared communication or microwave communication, and non-electromagnetic communication, e.g., sound communication and ultrasound communication. In this case, as shown, for example, in Figure 6, device 14 includes a transmitter 72 and preferably also a receiver or transceiver, whereas user client 12 includes a compatible receiver and optionally a transmitter or transceiver, for allowing mono or preferably bi-directional communication between device 14 and user client 12. Remote communication is well known in the art and therefore requires no further description herein.

As further stated hereinabove, a device 14 according to any of its presently preferred embodiments requires a dedicated software installed on user client 12 and operated thereby. Such a software has known software functions of a computer tracking device on one hand, and of a data-reader on the other hand. Such a software can be readily written by one of ordinary skills in the art. Such a software is preferably also designed to automatically communicate the electronic address to a second software, such as an electronic mail software or to a web page browser software, stored and operated by user client 12, so as to enable, for example, an automatic creation of an addressed electronic mail file or an automatic access to a web page. A small display 90 can be used to display the electronic address red or interpreted.

According to another aspect of the present invention there is provided a method of automatically entering an electronic address into a user-client. The method according to this aspect of the present invention is effected by using a data-reading computer tracking device including a computer tracking device and a data-reader integrated therein for reading and interpreting a printed form of the electronic address and for automatically entering the electronic address into a user-client with which the data-reading computer tracking device communicates.

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According to another embodiment of the present invention a computer integrated, add-on or connectable data-reader is employed to effect automatic entering of an electronic address to user client 12. As an example, an add-on data reader 80, is shown in Figure 7. In its stand-alone configuration the data-reader according to this embodiment of the present invention functions in a manner similar to that described for the tracking device integrated data-reader to permit automatic entering of an electronic address, such as a web page address or an electronic mail address into a user client 12 and optionally and preferably automatically accessing a web page.

Thus, the present invention enables a user to automatically access a web page or automatically create an addressed electronic mail file, by collecting and interpreting coded or un-coded printed data pertaining to an electronic address such as a web page address or an electronic mail address with a data-reader which is integrated, added or connected to a computer or integrated in a computer tracking device.

It is expected that during the life of this patent many relevant user clients, computer tracking devices and data-readers will be developed and the scope of these terms is intended to include all such new technologies *a priori*.

Many commercial organizations advertise themselves by freely distributing computer mouse pads having their affiliation and electronic address(es) printed thereon. As is detailed hereinabove, the present invention provides for automatic entering of an electronic address into a user client and/or access to a specific web page.

Therefore, as shown in Figure 8, according to yet another aspect of the present invention there is provided a mouse pad 90 which includes a pad 92 which is adapter for dragging a computer mouse thereon. Pad 90 has at least one barcode 94 encoding an electronic address printed thereon. By reading barcode 94 using a data-reader as herein described, the electronic address is automatically converted into a computer readable form, and is used according to any of the embodiments described hereinabove.

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment. Conversely, various features of the invention, which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

Although the invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, it is intended to embrace all such alternatives, modifications and variations that fall within the spirit and broad scope of the appended claims. All publications, patents and patent applications mentioned in this specification are herein incorporated in their entirety by reference into the specification, to the same extent as if each individual publication, patent or patent application was specifically and individually indicated to be incorporated herein by reference. In addition, citation or identification of any reference in this application shall not be construed as an admission that such reference is available as prior art to the present invention.

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WHAT IS CLAIMED IS:

1.   A data-reading computer tracking device comprising a computer tracking device and a data-reader being integrated therein, said data-reader being for reading a printed form of an electronic address.

2.   The device of claim 1, wherein said computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick, a track pad and a remote control.

3.   The device of claim 1, wherein data-reader includes a barcode reader.

4.   The device of claim 1, wherein said data-reader includes an optical scanner.

5.   The device of claim 1, wherein said electronic address is selected from the group consisting of an electronic mail address and a web page address.

6.   The device of claim 1, wherein said printed form of said electronic address is selected from the group consisting of a print of said electronic address and a print of a code of said electronic address.

7.   The device of claim 1, wherein said code is a barcode.

8.   A system for automatically entering an electronic address, the system comprising:
        (a)   a user-client; and
        (b)   a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein, said data-reading computer tracking device effectively communicating with said user-client for entering the electronic address thereto by reading and interpreting a printed form of said electronic address.

9.   The system of claim 8, wherein said computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick, a track pad and a remote control.

10.   The system of claim 8, wherein data-reader includes a barcode reader.

11.   The system of claim 8, wherein said data-reader includes an optical scanner.

12.   The system of claim 8, wherein said electronic address is selected from the group consisting of an electronic mail address and a web page address.

13.   The system of claim 8, wherein said printed form of said electronic address is selected from the group consisting of a print of said electronic address and a print of a code of said electronic address.

14.   The system of claim 8, wherein said code is a barcode.

15.   The system of claim 8, wherein said user client stores and operates a software designed to automatically communicate the electronic address to a second software selected from the group consisting of an electronic mail software or to a web page browser software, stored and operated by said user client.

16.   The system of claim 8, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

17.   A method of automatically entering an electronic address into a user-client, the method comprising the step of using a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein for reading and interpreting a printed form of said electronic address and for automatically entering said electronic address into a user-client with which said data-reading computer tracking device communicates.

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18.   The method of claim 17, wherein said computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick, a track pad and a remote control.

19.   The method of claim 17, wherein data-reader includes a barcode reader.

20.   The method of claim 17, wherein said data-reader includes an optical scanner.

21.   The method of claim 17, wherein said electronic address is selected from the group consisting of an electronic mail address and a web page address.

22.   The method of claim 17, wherein said printed form of said electronic address is selected from the group consisting of a print of said electronic address and a print of a code of said electronic address.

23.   The method of claim 17, wherein said code is a barcode.

24.   The method of claim 17, wherein said user client stores and operates a software designed to automatically communicate the electronic address to a second software selected from the group consisting of an electronic mail software or to a web page browser software, stored and operated by said user client.

25.   The method of claim 17, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

26.   A system for automatically accessing a web page, the system comprising:
     (a)   a user-client; and
     (b)   a data-reading computer tracking device including a computer tracking device and a data-reader being integrated therein, said data-reading computer tracking device effectively communicating with said user-client for entering a web page

address thereto by reading and interpreting a printed form of said web page address or a printed code thereof and further for actuating access to the web page.

27.   The system of claim 26, wherein said computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick, a track pad and a remote control.

28.   The system of claim 26, wherein data-reader includes a barcode reader.

29.   The system of claim 26, wherein said data-reader includes an optical scanner.

30.   The system of claim 26, wherein said printed form of said web page address is selected from the group consisting of a print of said web page address and a print of a code of said web page address.

31.   The system of claim 26, wherein said code is a barcode.

32.   The system of claim 26, wherein said user client stores and operates a software designed to automatically communicate the web page address to a web page browser software, stored and operated by said user client.

33.   The system of claim 26, wherein said user client stores and operates a software designed to automatically render operative, and communicate the web page address to, a web page browser software, stored and operated by said user client.

34.   The system of claim 26, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

35.   A method of automatically accessing a web page, the method comprising the step of using a data-reading computer tracking device including a computer tracking device and a data-reader being integrated

therein for reading and interpreting a printed form of said web page address and for automatically entering said web page address into a user-client with which said data-reading computer tracking device communicates and further for actuating access to the web page.

36.   The method of claim 35, wherein said computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick, a track pad and a remote control.

37.   The method of claim 35, wherein data-reader includes a barcode reader.

38.   The method of claim 35, wherein said data-reader includes an optical scanner.

39.   The method of claim 35, wherein said printed form of said web page address is selected from the group consisting of a print of said web page address and a print of a code of said web page address.

40.   The method of claim 35, wherein said code is a barcode.

41.   The method of claim 35, wherein said user client stores and operates a software designed to automatically communicate the web page address to a web page browser software, stored and operated by said user client.

42.   The method of claim 35, wherein said user client stores and operates a software designed to automatically render operative, and communicate the web page address to, a web page browser software, stored and operated by said user client.

43.   The method of claim 35, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

44.   A system for automatically entering an electronic address, the system comprising:

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(a)   a user-client; and

(b)   a data-reader effectively communicating with said user-client for entering the electronic address thereto by reading and interpreting a printed form of said electronic address.

45.   The system of claim 44, wherein data-reader includes a barcode reader.

46.   The system of claim 44, wherein said data-reader includes an optical scanner.

47.   The system of claim 44, wherein said electronic address is selected from the group consisting of an electronic mail address and a web page address.

48.   The system of claim 44, wherein said printed form of said electronic address is selected from the group consisting of a print of said electronic address and a print of a code of said electronic address.

49.   The system of claim 44, wherein said code is a barcode.

50.   The system of claim 44, wherein said user client stores and operates a software designed to automatically communicate the electronic address to a second software selected from the group consisting of an electronic mail software or to a web page browser software, stored and operated by said user client.

51.   The system of claim 44, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

52.   A method of automatically entering an electronic address into a user-client, the method comprising the step of using a data-reader for reading and interpreting a printed form of said electronic address and for automatically entering said electronic address into a user-client with which said data-reading computer tracking device communicates.

53.   The method of claim 52, wherein said computer tracking device is selected from the group consisting of a mouse, a pointer, a track ball, a track stick, a track pad and a remote control.

54.   The method of claim 52, wherein data-reader includes a barcode reader.

55.   The method of claim 52, wherein said data-reader includes an optical scanner.

56.   The method of claim 52, wherein said electronic address is selected from the group consisting of an electronic mail address and a web page address.

57.   The method of claim 52, wherein said printed form of said electronic address is selected from the group consisting of a print of said electronic address and a print of a code of said electronic address.

58.   The method of claim 52, wherein said code is a barcode.

59.   The method of claim 52, wherein said user client stores and operates a software designed to automatically communicate the electronic address to a second software selected from the group consisting of an electronic mail software or to a web page browser software, stored and operated by said user client.

60.   The method of claim 52, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

61.   A system for automatically accessing a web page, the system comprising:

 (a) a user-client; and

 (b) a data-reader effectively communicating with said user-client for entering a web page address thereto by reading and interpreting a printed form of said web page address or a

printed code thereof and further for actuating access to the web page.

62. The system of claim 26, wherein data-reader includes a barcode reader.

63. The system of claim 61, wherein said data-reader includes an optical scanner.

64. The system of claim 61, wherein said printed form of said web page address is selected from the group consisting of a print of said web page address and a print of a code of said web page address.

65. The system of claim 61, wherein said code is a barcode.

66. The system of claim 61, wherein said user client stores and operates a software designed to automatically communicate the web page address to a web page browser software, stored and operated by said user client.

67. The system of claim 61, wherein said user client stores and operates a software designed to automatically render operative, and communicate the web page address to, a web page browser software, stored and operated by said user client.

68. The system of claim 61, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

69. A method of automatically accessing a web page, the method comprising the step of using a data-reader for reading and interpreting a printed form of said web page address and for automatically entering said web page address into a user-client with which said data-reader communicates and further for actuating access to the web page.

70. The method of claim 69, wherein data-reader includes a barcode reader.

71.   The method of claim 69, wherein said data-reader includes an optical scanner.

72.   The method of claim 69, wherein said printed form of said web page address is selected from the group consisting of a print of said web page address and a print of a code of said web page address.

73.   The method of claim 69, wherein said code is a barcode.

74.   The method of claim 69, wherein said user client stores and operates a software designed to automatically communicate the web page address to a web page browser software, stored and operated by said user client.

75.   The method of claim 69, wherein said user client stores and operates a software designed to automatically render operative, and communicate the web page address to, a web page browser software, stored and operated by said user client.

76.   The method of claim 69, wherein said user client is selected from the group consisting of a desk top computer, a laptop computer, a palmtop computer, an integrated cellular phone-computer, a personal assist device and an Internet-TV.

78.   A mouse pad comprising a pad being adapter for dragging a computer mouse thereon having at least one barcode encoding an electronic address being printed thereon.
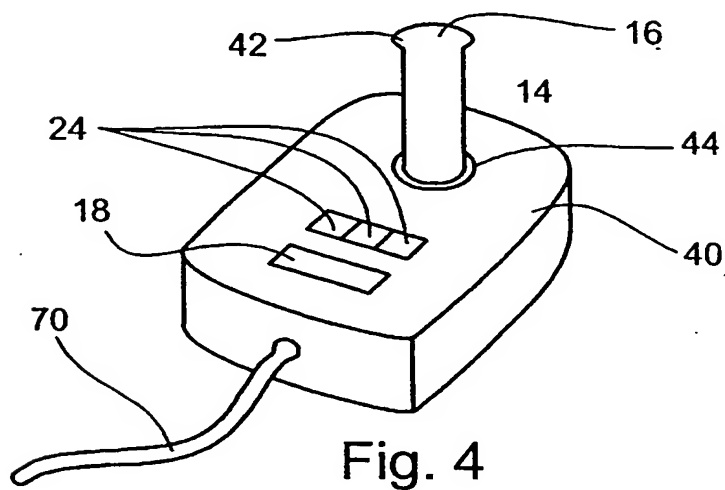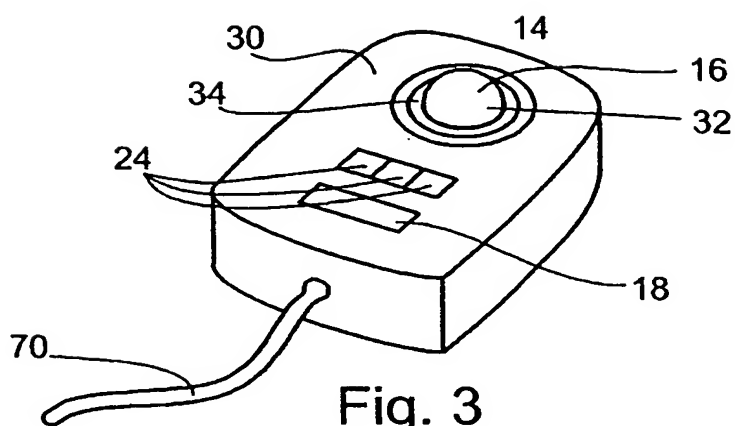
Fig. 1a

Fig. 1b

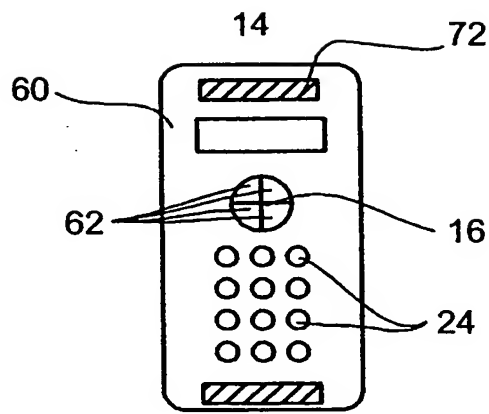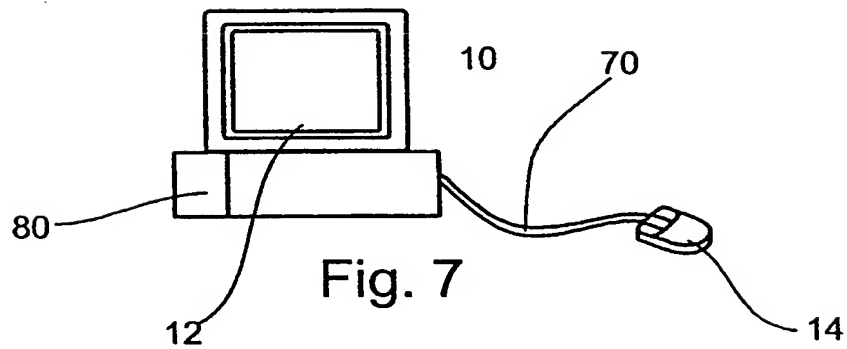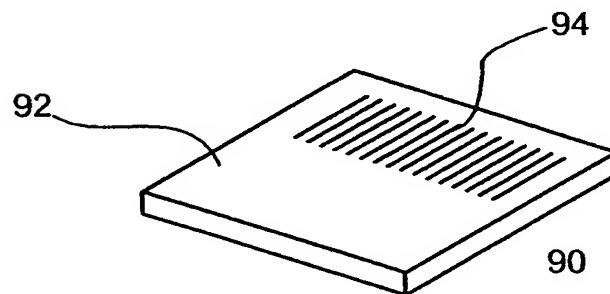Fig. 2

Fig. 3

Fig. 4

Fig. 5
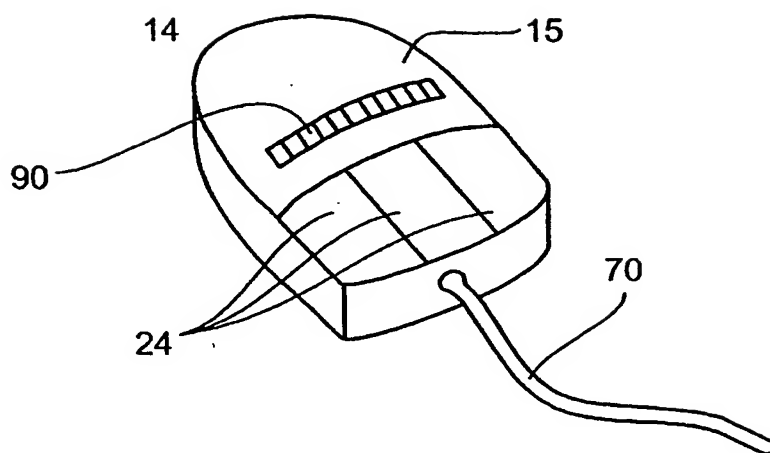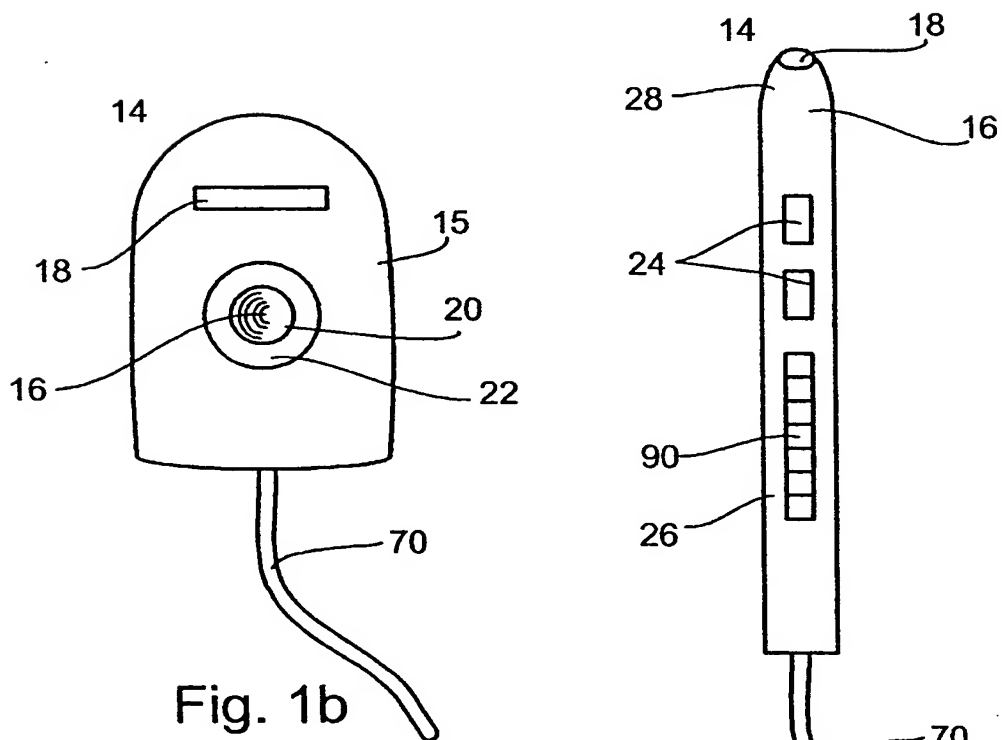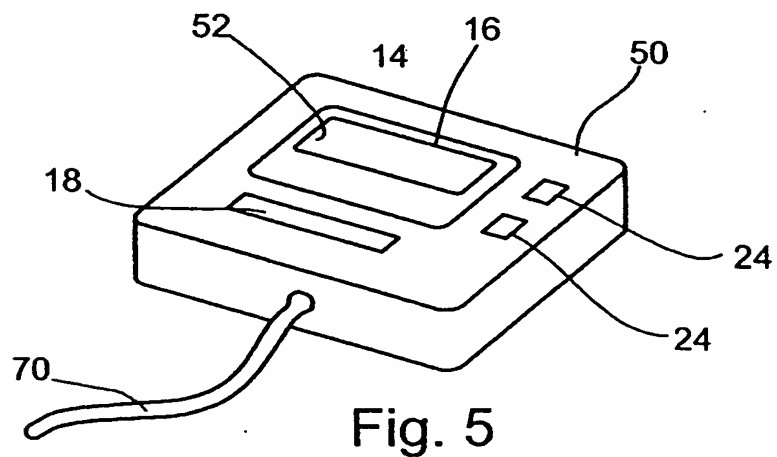
Fig. 6

Fig. 7

Fig. 8

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL00/00696

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G06K 7/10; G06F 15/16
US CL : 235/472, 472.01; 709/217

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 235/472, 472.01; 709/217

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST

search terms: mouse, barcode scanner, web browser

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---- Y	US 5,905,251 A (KNOWLES et al) 18 May 1999, col. 2, line 30 - col. 4, line 5.	44-46, 48-49, 51-52, 54-55, 57-58, 60-76 ——— 1-43, 47, 50, 53, 56, 57-59, 78
Y	US 5,633,489 A (DVORKIS et al) 27 May 1997, col. 2, line 33 - col. 4, line 56.	1-43, 47, 50, 53, 56, 57-59
Y	US 5,788,203 A (NITTI) 04 August 1998, col. 1, line 48 - col. 2, line 15.	78

☐ Further documents are listed in the continuation of Box C.   ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance		
"E"	earlier document published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
07 MARCH 2001	30 MAR 2001

| Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No.   (703) 305-3230 | Authorized officer PAUL KANG   *James R. Matthews* Telephone No.   (703) 305-9000 |

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